



National Aeronautics and  
Space Administration  
Goddard Space Flight Center

# Inside Wallops

Wallops Flight Facility, Wallops Island, Virginia

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## ***El Nino Brewing Again?***

Simultaneous measurements taken by two orbiting NASA science instruments suggest that another weather disrupting El Nino condition may be developing in the Pacific Ocean, with the potential of altering global weather patterns next winter.

Sea-surface height measurements taken by the radar altimeter onboard the U.S.-French TOPEX/POSEIDON satellite and wind data by the NASA Scatterometer on Japan's Advanced Earth Observing Satellite are being used together for the first time to diagnose changing oceanographic and atmospheric conditions in the tropical Pacific Ocean. Wallops managed the development of the altimeter and Code 972 personnel continue to monitor the data quality from the instrument.

The El Nino phenomenon is thought to be triggered when steady westward blowing trade winds weaken and reverse direction. This change in the winds allows the large mass of warm water that normally is located near Australia to move eastward along the equator until it reaches the coast of South America. Past El Nino events have caused unseasonably mild winters in the Eastern United States.

## ***Weather-Piercing Camera May Reduce Air Traffic Delays***

Air traffic delays due to poor visibility caused by weather can be virtually eliminated if technology being developed by U.S. industry and government looks as good in the air as it does on the ground.

NASA Langley Research Center is working with a consortium led by TRW Space and Electronics Group that is preparing to demonstrate in flight a weather-piercing camera that has allowed researchers to see through fog, smoke and clouds.

System checkout will begin later this month, followed by 60 hours of test and demonstration flights in September.

The camera "sees" in the millimeter wave portion of the electromagnetic spectrum, a portion that is invisible to the human eye. It produces video images that enable a pilot to discern features like runways, obstacles and the horizon.



*A NASA/McDonnell Douglas remotely piloted, tailless aircraft successfully completed its first flight May 17 at the Dryden Flight Research Center. The lack of vertical tails greatly enhances the stealthy characteristics of the airplane, and holds promise for greater agility than is currently available in existing military fighter aircraft. The X-36 subscale research aircraft is expected to conduct an additional 24 test flights during the next six months. Two 28-percent-scale X-36s are designed to fly without the traditional vertical and horizontal tails found on most aircraft. Each aircraft measures 18 feet long, 3 feet high, has a 10-foot wing span and weighs 1,250 pounds.*

## ***Imax to Document Station Assembly in 3-D***

The on-orbit construction of the International Space Station will be documented in 3-D by the Imax Corporation in a large-format (70-mm) feature film to be seen around the world.

This will be the first 70-mm space film to be captured in 3-D, a breakthrough made possible by Imax's current development of a 3-D movie camera that will meet the exacting requirements and strict limitations of flying on spacecraft. The film also will be distributed in Imax's 2-D format.

"Our astronauts have said that previous Imax films are the closest thing to actually being in space," NASA Administrator Daniel Goldin said. "Capturing the assembly of the International Space Station in this realistic and compelling format will help NASA share this experience with

the public. After all, the station belongs to the public, and they have a right to watch it become reality."

The feature film will be made under a Space Act Agreement between NASA and Imax. NASA will own the copyright on all film footage shot in space under the agreement. The agency, in turn, has granted Imax a limited license to create a large-format feature film using the footage. All of the footage eventually will be made available publicly. Meanwhile, NASA retains the right to disseminate, at any time, still photos and videotape segments made from the 70-mm footage.

There are now 153 Imax theaters in 22 countries, including 74 in the United States. Twenty-nine of the theaters are capable of showing 3-D films.

## ***Balloon Launches in Palestine***

A scientific balloon carrying an infrared astronomy payload was successfully launched June 2 at the National Scientific Balloon Facility in Palestine, TX.

The 39.57 million cubic foot balloon carried an experiment to observe cosmic microwave background radiation anisotropy. The payload was recovered. The principal investigator was Dr. Edward Cheng (Code 685).

Monthly Weather  
Summary  
by Ted Wilz, Senior Meteorologist

Ready for picnics, golfing, fishing and bikinis on the beach? You bet.

During mid-May and again from Memorial Day to the end of the month, two record breaking plunges of cool Canadian air caused the average daily temperature for the month to be 2.6 degrees Fahrenheit below normal.

New record lows were set May 14 when nighttime temperatures reached a low of 44 degrees and on May 28 and 29 when a second, cooler surge of air caused record lows of 42 and 41 degrees.

With the cool temperatures and an abundance of clouds, it seems summer will never come. Although there were several cloudy days, May was well below average in precipitation. There were 12 days with measurable rainfall that totaled only 1.68 inches, which is over 1.5 inches below normal.

We're hoping that July will bring better weather. The usual afternoon sea breezes should keep average high temperatures in the mid 80s, while inland locations could experience temperatures in the 90s.

Rainfall averages for July are 3.57 inches, mostly as a result of afternoon and early evening showers and thunderstorms. Keep in mind that dangerous lightning, hail and strong winds often accompany these storms.

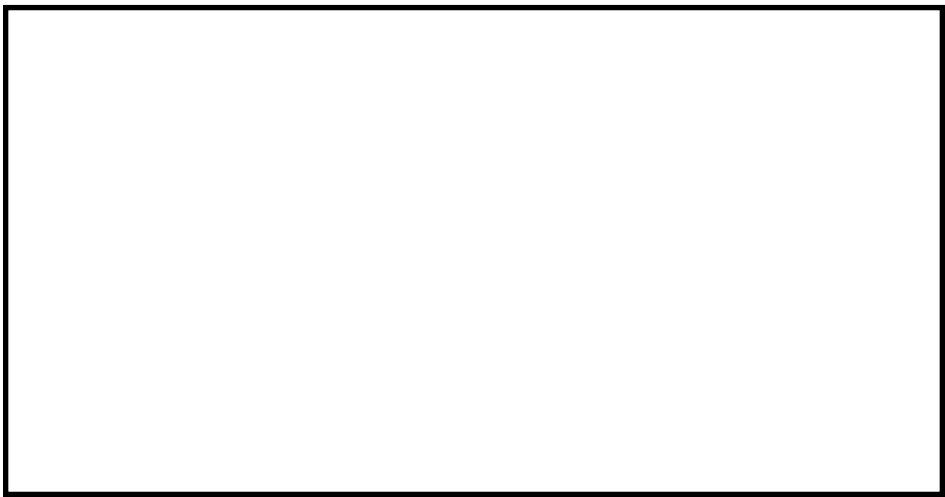
Last July there were 14 days with measurable rainfall and 5 days with thunderstorms.

Another weather hazard this time of year is the formation of tropical storms and hurricanes. The tropical storm season began June 1 and runs through November 30. The frequency of occurrences gradually increases from June 1 to the peak period from late August into September then begins to taper off.

Tropical storms can affect the mid-Atlantic coast anytime during the summer. Proper preparation and communication can lessen the dangers that accompany them.

This year's "storm line up" from the National Hurricane Center follows:

Ana	Bill	Claudette
Danny	Erika	Fabian
Grace	Henri	Isabel
Juan	Kate	Larry
Mindy	Nicholas	Odetta
Peter	Rose	Sam
Teresa	Victor	Wanda



**Steak and Shrimp Dinner**

**June 14 6 p.m. Building F-3**



**\$15 per person  
Advance Ticket Sales Only  
Call x1133, x1483**

**Celebrating the  
4th Annual  
INTERNATIONAL LUNCHEON  
in honor of  
INTERNATIONAL DAY**

**June 24, 1997  
Building F-3, Starting at 11:30 a.m.**

Admission: One covered dish containing food of any nationality

For more information or to register your dish contact one of the following: Sandra Banks x2526, Linda Thompson x1072, Nicole Turner x1418 or Roland Wescott x1624.

Respond no later than June 14.

All dishes will be labeled with title of dish and origin.

Sponsored by the EO Advisory Committee on Minorities and Persons with Disabilities

**Upcoming: Wallops Annual July 4 Picnic**

Plans are underway for the annual July 4 picnic to be held from 11 a.m. to 5 p.m. at the Wallops ballpark and picnic area.

This year, music will be provided by Margot's New Band from noon until 4 p.m. As an added treat, Mr. Bill, the ventriloquist, and his friends will be present during the day.

Other events planned include volleyball, baseball, horseshoes, water slide, hay rides and children's games.

Hamburgers, hotdogs, corn on the cob and beverages will be provided, but everyone attending is asked to bring a covered dish.

The picnic, under the direction of Gerry McIntire and Bev Hall, is sponsored by the Wallops Morale Activities Committee. Anyone who can spare an hour to help set up or is willing to help with the picnic is asked to call either Gerry, x1889, or Bev on x1714.

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